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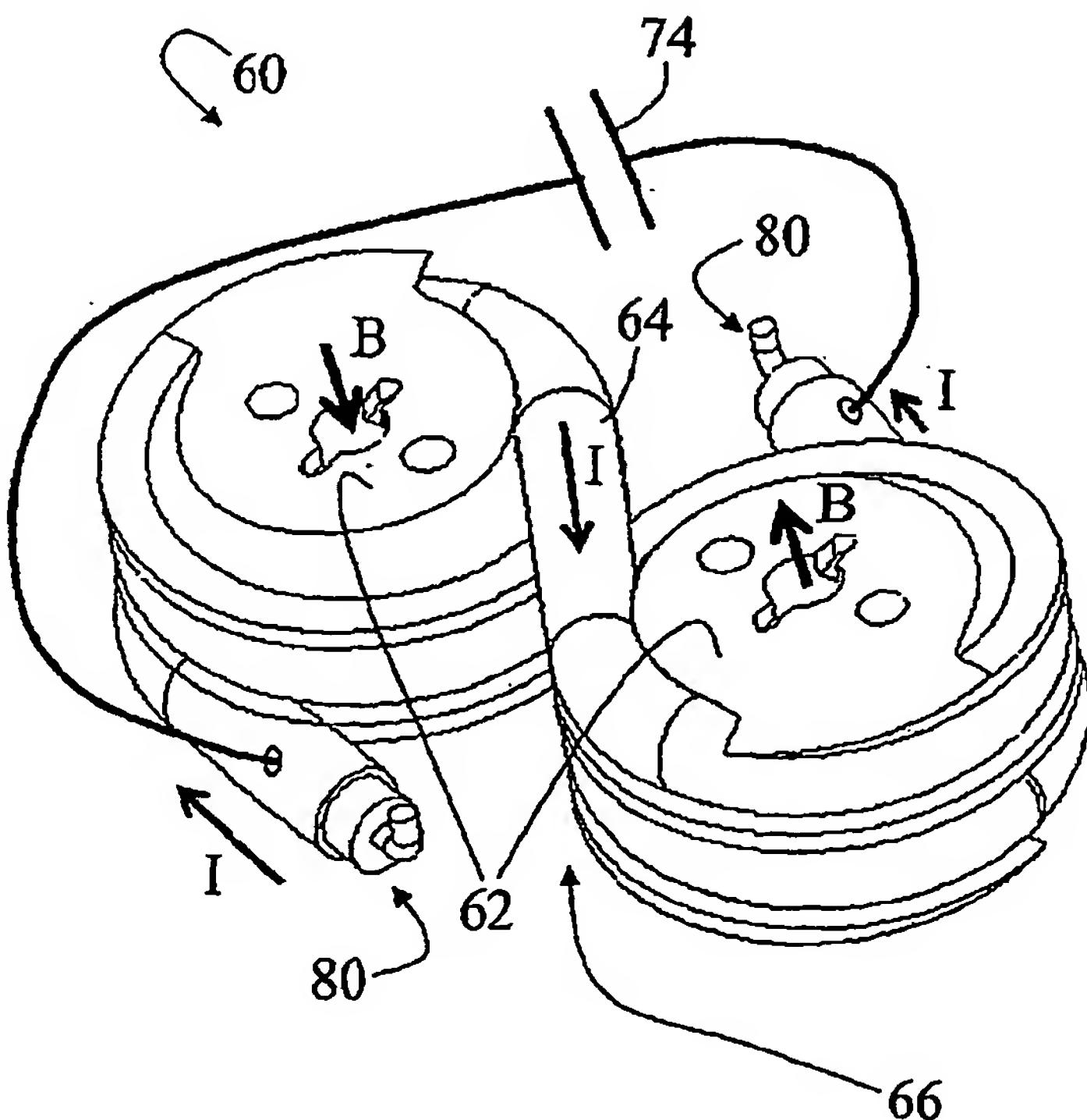
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(54) Title: RF TRAP TUNED BY SELECTIVELY INSERTING ELECTRICALLY CONDUCTIVE TUNING ELEMENTS



(57) Abstract: A magnetic resonance imaging scanner (10) includes a main magnet (20) generating a spatially uniform main magnetic field at least over a field of view, a plurality of gradient coils (30) selectively generating magnetic field gradients at least over the field of view, and a radio frequency coil (32, 34) for performing at least one of exciting and detecting magnetic resonance at the selected resonance frequency in an imaging subject disposed in the field of view. A radio frequency trap (60, 60') connected with the radio frequency coil (32, 34) includes helically grooved dielectric formers (62, 62') around which a coaxial cable (64) is wrapped. A plurality of electrically conductive tuning elements such as screws or rods (84, 90) are selectively inserted into the dielectric formers (62, 62') to tune the radio frequency trap (60, 60') to a selected resonance frequency by adjusting the inductance of the trap.

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